

In the Claims

1. (Original) A method comprising:
detecting a failure of a first virtualization device of a storage area network interconnect,
wherein said first virtualization device is associated with a unique interconnect device identifier; and
associating said unique interconnect device identifier with a second virtualization device of said storage area network interconnect in response to said detecting.
2. (Original) The method of claim 1 wherein
said storage area network interconnect is coupled to an application host and to a storage device,
said first virtualization device is configured to present a virtual storage element to said application host using a host device identifier, and
said virtual storage element comprises at least a portion of said storage device.
3. (Currently Amended) The method of claim 2 wherein
said second virtualization device is configured to present said virtual storage element to said application host using said host device identifier in response to said associating; and
said second virtualization device is selected from a plurality of virtualization devices.
4. (Currently Amended) The method of claim 3 wherein said detecting comprises:
monitoring a communications link for a heartbeat signal from said first virtualization device via a failover manager.

5. (Original) The method of claim 3 wherein
said storage area network interconnect is further coupled to a metadata host,
said metadata host is configured to maintain metadata associated with said virtual
storage element, and
said associating comprises modifying said metadata.
6. (Original) The method of claim 5 wherein
said modifying comprises generating a metadata entry corresponding to said
second virtualization device, and
said metadata entry comprises said unique interconnect device identifier.
7. (Original) The method of claim 3 further comprising:
storing a volume map at said second virtualization device in response to said
detecting.
8. (Original) The method of claim 3 wherein said unique interconnect device
identifier comprises a Fibre Channel device identifier.
9. (Original) The method of claim 3 wherein said unique interconnect device
identifier comprises at least one of a world wide node name and a world wide port name.
10. (Original) The method of claim 3 wherein
said first virtualization device comprises a first virtualization switch, and
said second virtualization device comprises a second virtualization switch.
11. (Currently Amended) A machine-readable medium storing having a plurality
of instructions executable by a machine embodied therein, wherein said plurality of
instructions when executed cause said machine to perform a method comprising:
detecting a failure of a first virtualization device of a storage area network
interconnect,
wherein said first virtualization device is associated with a unique
interconnect device identifier;

associating said unique interconnect device identifier with a second virtualization device of said storage area network interconnect in response to said detecting.

12. **(Currently Amended)** The machine-readable medium storing a plurality of instructions executable by a machine embodied therein of claim 11 wherein said storage area network interconnect is coupled to an application host and to a storage device, said first virtualization device is configured to present a virtual storage element to said application host using a host device identifier, and said virtual storage element comprises at least a portion of said storage device.

13. **(Currently Amended)** The machine-readable medium storing a plurality of instructions executable by a machine embodied therein of claim 12 wherein said second virtualization device is configured to present said virtual storage element to said application host using said host device identifier in response to said associating.

14. **(Currently Amended)** The machine-readable medium storing a plurality of instructions executable by a machine embodied therein of claim 13 wherein said detecting comprises:

monitoring a communications link for a heartbeat signal from said first virtualization device.

15. **(Currently Amended)** The machine-readable medium storing a plurality of instructions executable by a machine embodied therein of claim 13 wherein said storage area network interconnect is further coupled to a metadata host, said metadata host is configured to maintain metadata associated with said virtual storage element, and said associating comprises modifying said metadata.

16. (Currently Amended) The machine-readable medium storing a plurality of instructions executable by a machine embodied therein of claim 15 wherein

 said modifying comprises generating a metadata entry corresponding to said second virtualization device, and
 said metadata entry comprises said unique interconnect device identifier.

17. (Currently Amended) The machine-readable medium storing a plurality of instructions executable by a machine embodied therein of claim 13, said method further comprising:

 storing a volume map at said second virtualization device in response to said detecting.

18. (Currently Amended) The machine-readable medium storing a plurality of instructions executable by a machine embodied therein of claim 13 wherein said unique interconnect device identifier comprises a Fibre Channel device identifier.

19. (Currently Amended) The machine-readable medium storing a plurality of instructions executable by a machine embodied therein of claim 13 wherein said unique interconnect device identifier comprises at least one of a world wide node name and a world wide port name.

20. (Currently Amended) The machine-readable medium storing a plurality of instructions executable by a machine embodied therein of claim 13 wherein

 said first virtualization device comprises a first virtualization switch, and
 said second virtualization device comprises a second virtualization switch.

21. (Original) A data processing system comprising:

 means for detecting a failure of a first virtualization device of a storage area network interconnect, wherein
 said first virtualization device is associated with a unique interconnect device identifier,
 said storage area network interconnect is coupled to an application host and to a storage device,

said first virtualization device is configured to present a virtual storage element to said application host using a host device identifier, and said virtual storage element comprises at least a portion of said storage device; and

 means for associating said unique interconnect device identifier with a second virtualization device of said storage area network interconnect coupled to said means for detecting.

22. (Original) The data processing system of claim 21 wherein said second virtualization device is configured to present said virtual storage element to said application host using said host device identifier in response to said associating.

23. (Original) The data processing system of claim 22 wherein said means for detecting comprises:

 means for monitoring a communications link for a heartbeat signal from said first virtualization device.

24. (Original) The data processing system of claim 22 wherein said storage area network interconnect is further coupled to a metadata host, said metadata host is configured to maintain metadata associated with said virtual storage element, and
 said means for associating comprises means for modifying said metadata.

25. (Original) The data processing system of claim 22 wherein said unique interconnect device identifier comprises a Fibre Channel device identifier.

26. (Original) The data processing system of claim 22 wherein said unique interconnect device identifier comprises at least one of a world wide node name and a world wide port name.

27. (Original) The data processing system of claim 22 wherein said first virtualization device comprises a first virtualization switch, and said second virtualization device comprises a second virtualization switch.

28. (Original) A data processing system comprising:
a monitor module to monitor a communications link for a heartbeat signal from a
first virtualization device of a storage area network interconnect,
wherein said first virtualization device is associated with a unique
interconnect device identifier; and
a failover module coupled to said monitor module to detect a failure of said first
virtualization device and to associate said unique interconnect device
identifier with a second virtualization device of said storage area network
interconnect in response to said detecting.
29. (Original) The data processing system of claim 28 wherein
said storage area network interconnect is coupled to an application host and to a
storage device,
said first virtualization device is configured to present a virtual storage element to
said application host using a host device identifier, and
said virtual storage element comprises at least a portion of said storage device.
30. (Original) The data processing system of claim 29 wherein
said second virtualization device is configured to present said virtual storage
element to said application host using said host device identifier following
a failure of said first virtualization device.